WHAT IS CLAIMED IS:

1   1.   A method for updating code in a nodal system including at least two

2   nodes, wherein each node includes a processing unit and a memory including code, and

3   wherein the nodes communicate over a communication interface, comprising:

4   transmitting, with at least one querying node, a request to at least one queried

5   node in the nodal system for a level of the code at the node over the communication

6   interface;

7   receiving, with one node, a response from the queried node receiving the request

8   indicating the level of code at the queried node over the communication interface; and

9   determining, with the node receiving the response, whether at least one queried

10   node has a higher code level.

1   2.   The method of claim 1, further comprising:

2   retrieving, with the node receiving the response, a copy of the code at the higher

3   code level queried node if one queried node has the determined higher code level; and

4   updating, with the node retrieving the copy of the code, the memory with the

5   retrieved copy of the code at the higher code level from the queried node.

1   3.   The method of claim 1, wherein the node receiving the response from the

2   queried node and determining whether the queried node has the higher code level

3   comprises the querying node or a node that did not transmit the request to the queried

4   node.

1   4.   The method of claim 2, further comprising:

2   broadcasting, with the queried node having the highest code level, the code to

3   multiple nodes over the communication interface, wherein the nodes retrieve the copy of

4   the code by reading the broadcast of the code on the communication interface.

1   5.   The method of claim 1, wherein determining whether one queried node

2   has a higher code level is performed each time the nodal system is reset or the querying

3   node is reset independently.

1   6.   The method of claim 1, wherein multiple querying nodes transmit the

2   request for the code level to one queried node, and wherein the queried node broadcasts

3   information on the code level to the nodes.

1   7.   The method of claim 1, wherein the queried node serially broadcasts the

2   code level information to the nodes.

1   8   The method of claim 1, wherein all nodes in the nodal system transmit the

2   request to the at least one queried nodes and determine whether the queried nodes have

3   the higher code level.

1   9.   The method of claim 1, wherein each node has the same code set, wherein

2   a portion of the code includes instructions used by all the nodes in the system and

3   wherein the code includes instructions for functions used exclusively by each of the

4   nodes.

1   10.   The method of claim 1, wherein a first node is capable of controlling an

2   accessor in a storage library system to access storage cartridges and wherein a second

3   node is capable of interfacing with a host system and communicating commands from the

4   host system to the first node to execute.

1   11.   The method of claim 1, wherein the at least one querying node executes a

2   routine to transmit the requests to the at least one queried node, receive the response from

3   the at least one queried node, and determine whether the at least one queried node has a

4   higher code level than a code level indicated in a parameter in the memory, wherein the

5   parameter is initially set to the code level of the querying node.

1   12.   The method of claim 1, wherein the nodes further perform:

2   maintaining a parameter indicating the code level at the node;

3   initializing the parameter with the code level at the querying node before

4   transmitting the requests for the code level at the other nodes; and

5   updating the parameter with the code level at the queried nodes if the queried

6   nodes have the higher code level.

1   13.   A system for updating code in a nodal system, comprising:

2   at least two nodes, wherein each node includes a processing unit and a memory

3   including code;

4   a communication interface, wherein the nodes communicate over the

5   communication interface;

6   program logic in a computer readable medium for causing the node processing

7   units to perform:

8   (i) transmitting a request to at least one queried node in the nodal system

9   for a level of the code at the node over the communication interface;

10   (ii) receiving a response from the queried node receiving the request

11   indicating the level of code at the queried node over the communication interface;

12   and

13   (ii) determining whether at least one queried node has a higher code level.

1   14.   The system of claim 13, wherein the program logic is further capable of

2   causing the node processing units that receive the response from the queried node to

3   perform:

4   retrieving a copy of the code at the higher code level queried node if one queried

5   node has the determined higher code level; and

6   updating the memory with the retrieved copy of the code at the higher code level

7   from the queried node.

1   15.   The system of claim 13, wherein the node receiving the response from the

2   queried node and determining whether the queried node has the higher code level

3   comprises the querying node or a node that did not transmit the request to the queried

4   node.

1   16.   The system of claim 14, wherein the program logic is further capable of

2   causing the queried node processing units to perform:

3   broadcasting, with the queried node having the highest code level, the code to

4   multiple nodes over the communication interface, wherein the nodes retrieve the copy of

5   the code by reading the broadcast of the code on the communication interface.

1   17.   The system of claim 13, wherein determining whether one queried node

2   has a higher code level is performed each time the nodal system is reset or the querying

3   node is reset independently.

1   18.   The system of claim, wherein multiple querying nodes transmit the request

2   for the code level to one queried node, and wherein the queried node broadcasts

3   information on the code level to the nodes.

1   19.   The system of claim 13, wherein the program logic is further capable of

2   causing the queried node processing units to perform serially broadcasts the code level

3   information to the nodes.

1   20.   The system of claim 13, wherein all nodes in the nodal system transmit the

2   request to the at least one queried nodes and determine whether the queried nodes have

3   the higher code level.

1   21.   The system of claim 13, wherein each node has the same program logic

2   code set, wherein a portion of the code includes instructions used by all the nodes in the

3   system and wherein the code includes instructions for functions used exclusively by each

4   of the nodes.

1   22.   The system of claim 13, wherein a first node is capable of controlling an

2   accessor in a storage library system to access storage cartridges and wherein a second

3   node is capable of interfacing with a host system and communicating commands from the

4   host system to the first node to execute.

1   23.   The system of claim 13, wherein the program logic is further capable of

2   causing the querying node processing units to perform:

3   executing a routine to transmit the requests to the at least one queried node,

4   receive the response from the at least one queried node, and determine whether the at

5   least one queried node has a higher code level than a code level indicated in a parameter

6   in the memory, wherein the parameter is initially set to the code level of the querying

7   node.

1   24.   The system of claim 13, wherein the program logic is further capable of

2   causing the node processing units to perform:

3   maintaining a parameter indicating the code level at the node;

4   initializing the parameter with the code level at the querying node before

5   transmitting the requests for the code level at the other nodes; and

6 updating the parameter with the code level at the queried nodes if the queried

7 nodes have the higher code level.

1 25. An article of manufacture for updating code in a nodal system including at

2 least two nodes, wherein each node includes a processing unit and a memory including

3 code, wherein the nodes communicate over a communication interface, and wherein the

4 article of manufacture comprises code in a computer readable medium capable of causing

5 the node processing units to perform:

6 transmitting, with at least one querying node, a request to at least one queried

7 node in the nodal system for a level of the code at the node over the communication

8 interface;

9 receiving, with one node, a response from the queried node receiving the request

10 indicating the level of code at the queried node over the communication interface; and

11 determining, with the node receiving the response, whether at least one queried

12 node has a higher code level.

1 26. The article of manufacture of claim 25, wherein the article of manufacture

2 code is further capable of causing the node processing units to perform:

3 retrieving, with the node receiving the response, a copy of the code at the higher

4 code level queried node if one queried node has the determined higher code level; and

5 updating, with the node retrieving the copy of the code, the memory with the

6 retrieved copy of the code at the higher code level from the queried node.

1 27. The article of manufacture of claim 25, wherein the node receiving the

2 response from the queried node and determining whether the queried node has the higher

3 code level comprises the querying node or a node that did not transmit the request to the

4 queried node.

1   28.   The article of manufacture of claim 26, wherein the article of manufacture

2   code is further capable of causing the node processing units to perform:

3   broadcasting, with the queried node having the highest code level, the code to

4   multiple nodes over the communication interface, wherein the nodes retrieve the copy of

5   the code by reading the broadcast of the code on the communication interface.

1   29.   The article of manufacture of claim 25, wherein determining whether one

2   queried node has a higher code level is performed each time the nodal system is reset or

3   the querying node is reset independently.

1   30.   The article of manufacture of claim 25, wherein multiple querying nodes

2   transmit the request for the code level to one queried node, and wherein the queried node

3   broadcasts information on the code level to the nodes.

1   31.   The article of manufacture of claim 25, wherein the article of manufacture

2   code is further capable of causing the queried node serially broadcasts the code level

3   information to the nodes.

1   32   The article of manufacture of claim 25, wherein the article of manufacture

2   code is further capable of causing all nodes in the nodal system to transmit the request to

3   the at least one queried nodes and determine whether the queried nodes have the higher

4   code level.

1   33.   The article of manufacture of claim 25, wherein each node has the same

2   code set, wherein a portion of the code includes instructions used by all the nodes in the

3   system and wherein the code includes instructions for functions used exclusively by each

4   of the nodes.

1   34.   The article of manufacture of claim 25, wherein a first node is capable of

2   controlling an accessor in a storage library system to access storage cartridges and

3   wherein a second node is capable of interfacing with a host system and communicating

4   commands from the host system to the first node to execute.

1   35.   The article of manufacture of claim 25, wherein the article of manufacture

2   code is further capable of causing the querying node to execute a routine to transmit the

3   requests to the at least one queried node, receive the response from the at least one

4   queried node, and determine whether the at least one queried node has a higher code level

5   than a code level indicated in a parameter in the memory, wherein the parameter is

6   initially set to the code level of the querying node.

1   36.   The article of manufacture of claim 25, wherein the article of manufacture

2   code is further capable of causing the nodes to perform:

3   maintaining a parameter indicating the code level at the node;

4   initializing the parameter with the code level at the querying node before

5   transmitting the requests for the code level at the other nodes; and

6   updating the parameter with the code level at the queried nodes if the queried

7   nodes have the higher code level.